

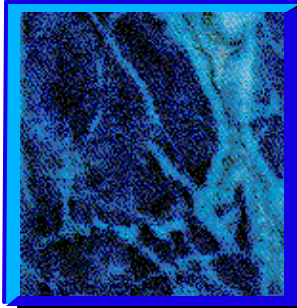
# Toward Sustainability: A Change of Mind

EPA's New Campus at  
Research Triangle Park, NC

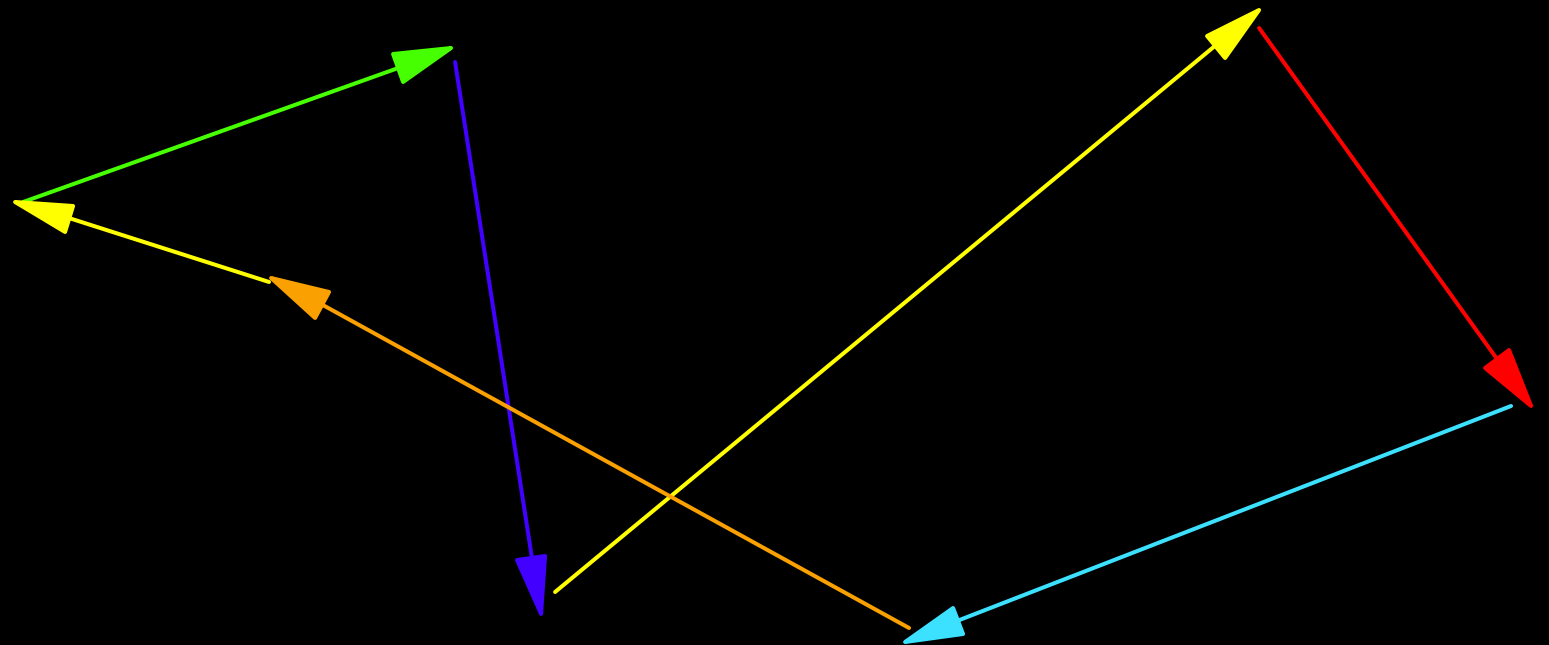


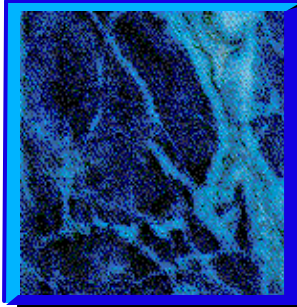






# See the Connections





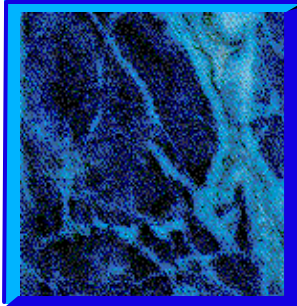
# Stewardship

**Buildings**

Agriculture

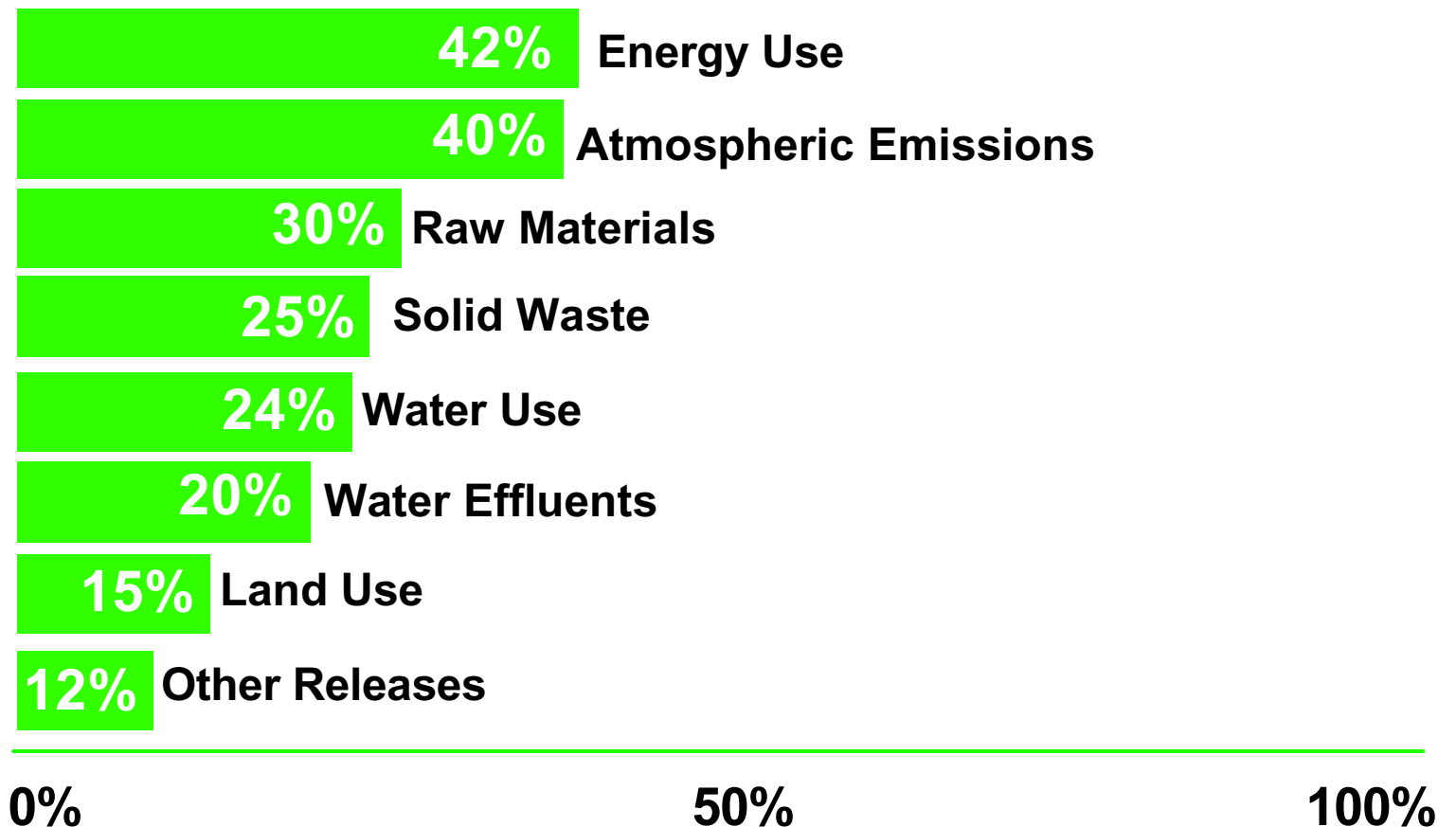
Transportation  
and other stuff

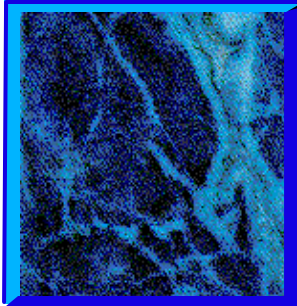
One third of  
our environmental  
impacts



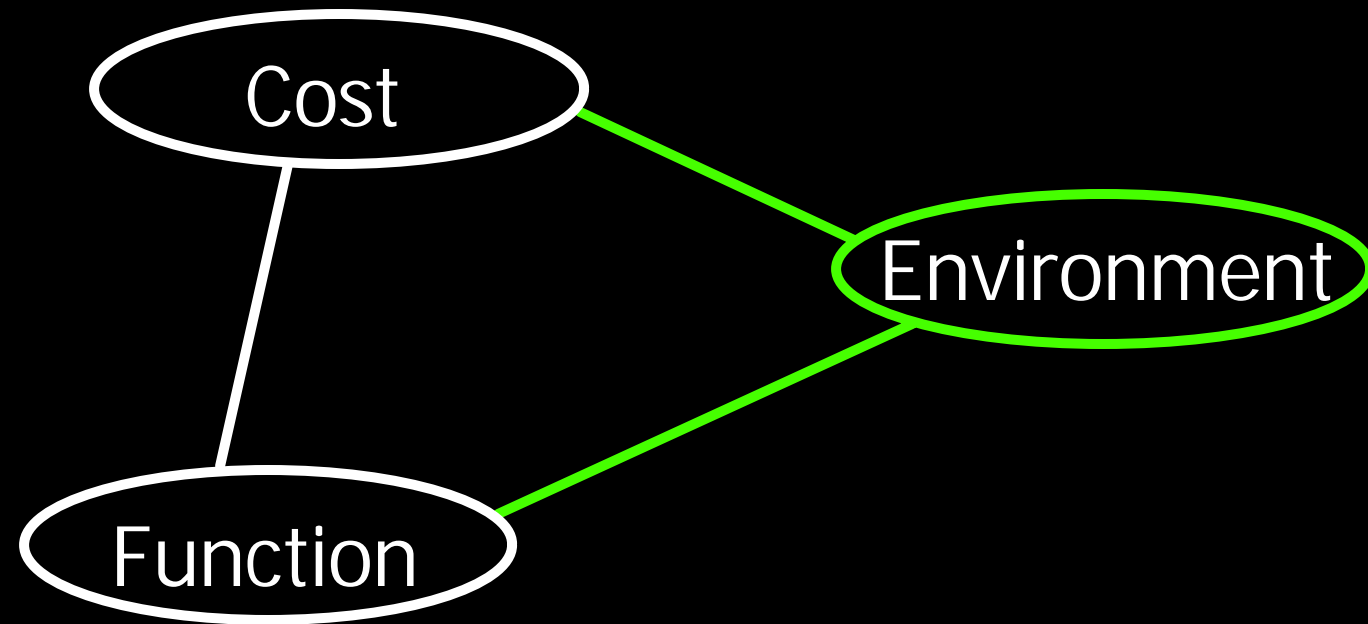
# Buildings

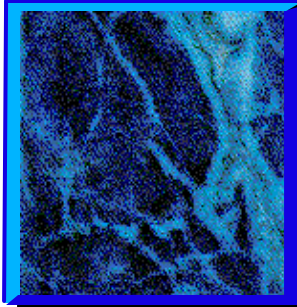
Percentage of annual U.S. environmental impacts



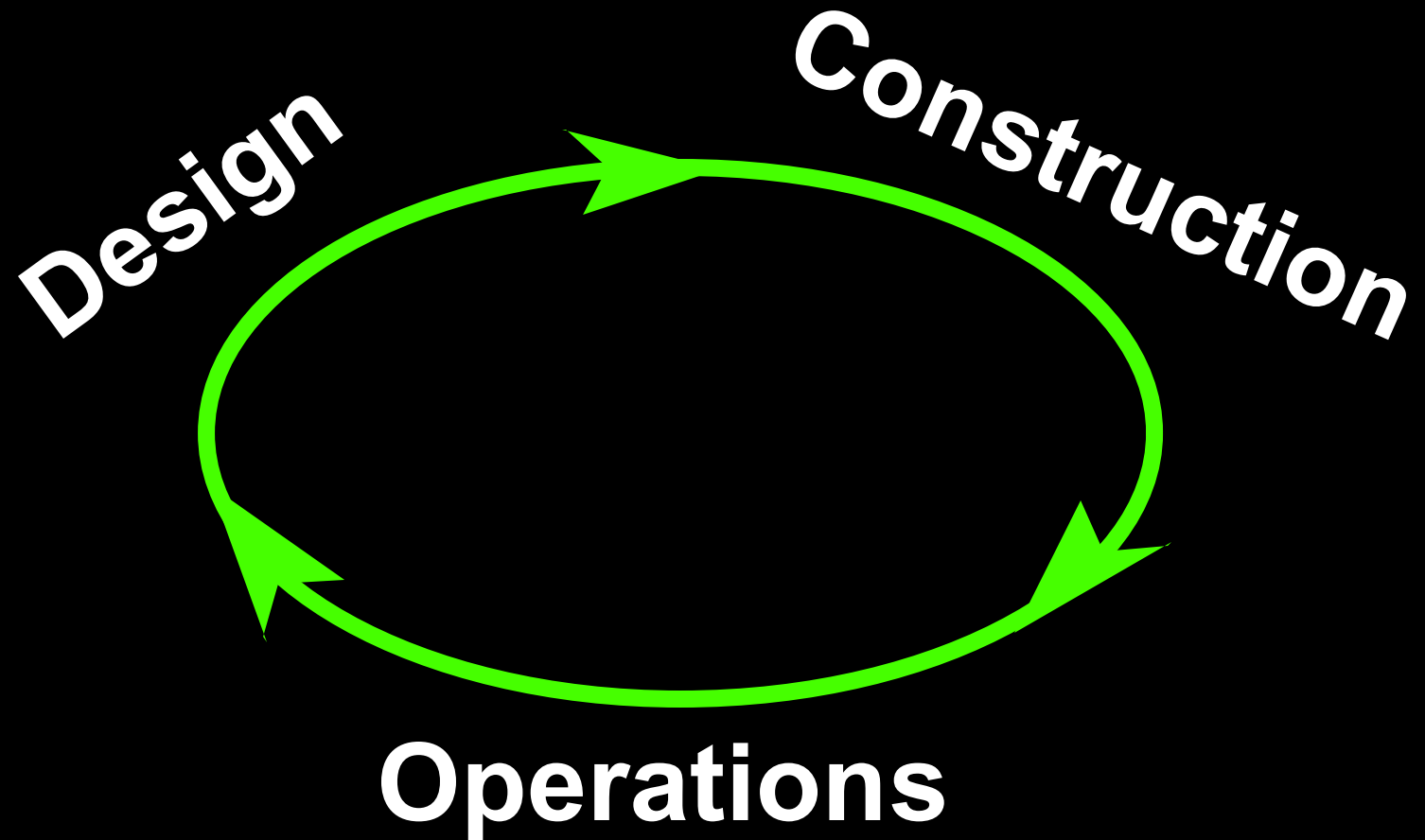


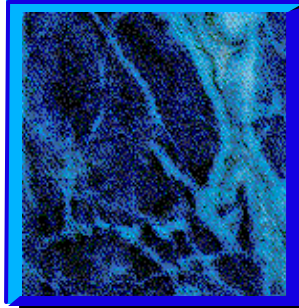
# Balance





# Life-Cycle Focus

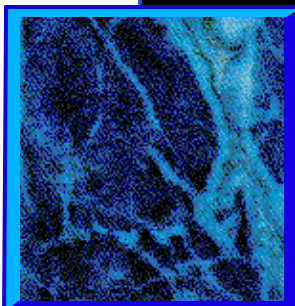




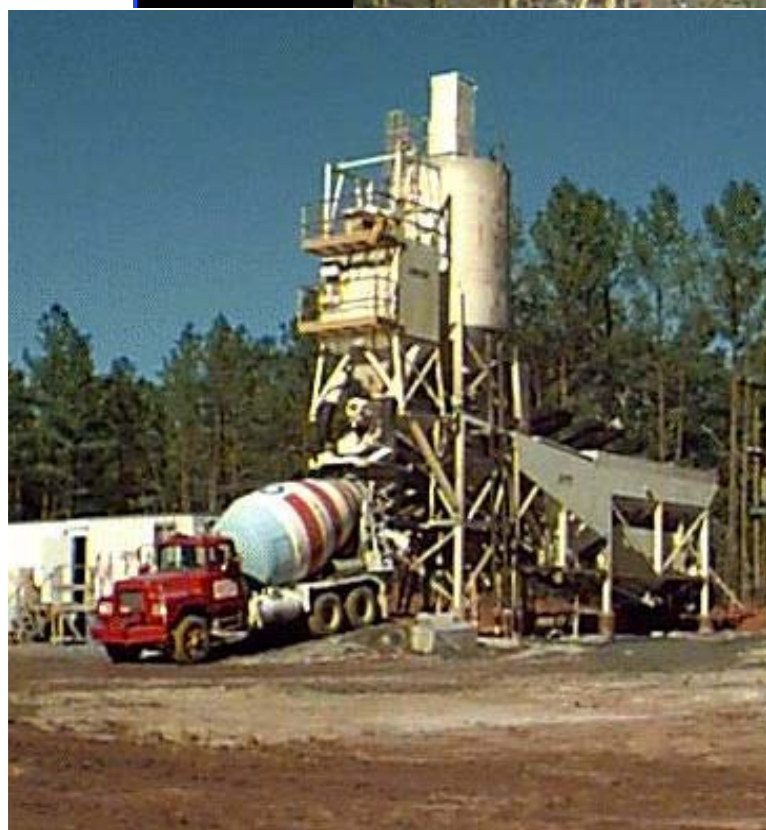
# Environmental Advocates





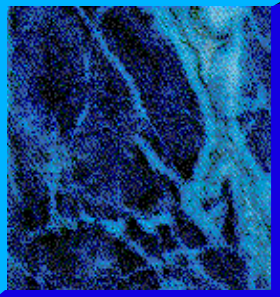


# Win-Win View



On-site concrete



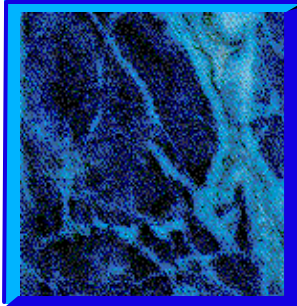


# Site

Minimized clearing  
Narrowed roads  
Parking decks  
Cut out curb/gutter  
Biofiltration  
More wetlands  
Wildflowers  
Native plants  
Plant rescue



Solar road lights

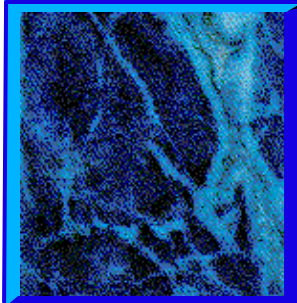


# Utility Plant

- High-efficiency equipment
- Variable speed drives
- Digital controls
- Water saving cooling towers
- No CFCs
- Shared chillers/boilers/tanks
- Reduced footprint
- Re-used wall panels







# Energy & Water



40% more efficient than typical lab

Green lights with daylighting

High performance glass and roof

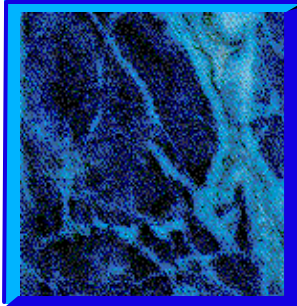
Building automation system

VAV and economizers

Commissioning

Solar roof

Water-conserving fixtures



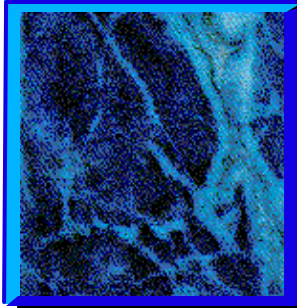
# Indoor Environment

Daylight  
Fresh air  
Acoustics  
Sanitation  
Aesthetics









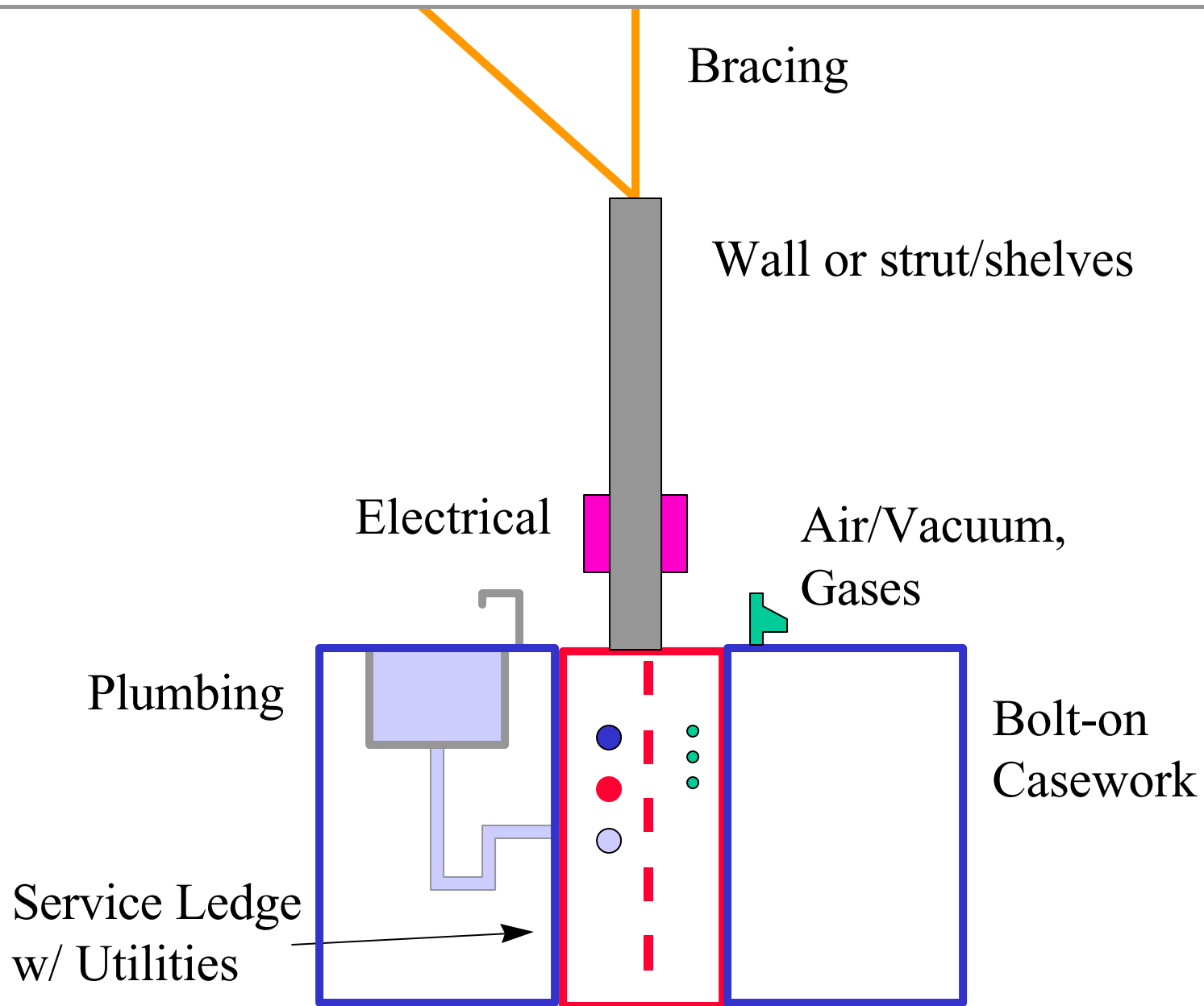
# Building Materials

Recycled content throughout  
Sustainable wood  
Restricted chemical contents  
IAQ testing of major materials  
Recyclable carpet  
Flexible space  
Longevity



Enough recycled steel  
to build an Eiffel Tower  
plus 1,000 cars

# Modular Lab Services







# Lab Building Blocks

Hallway

Office/  
Support

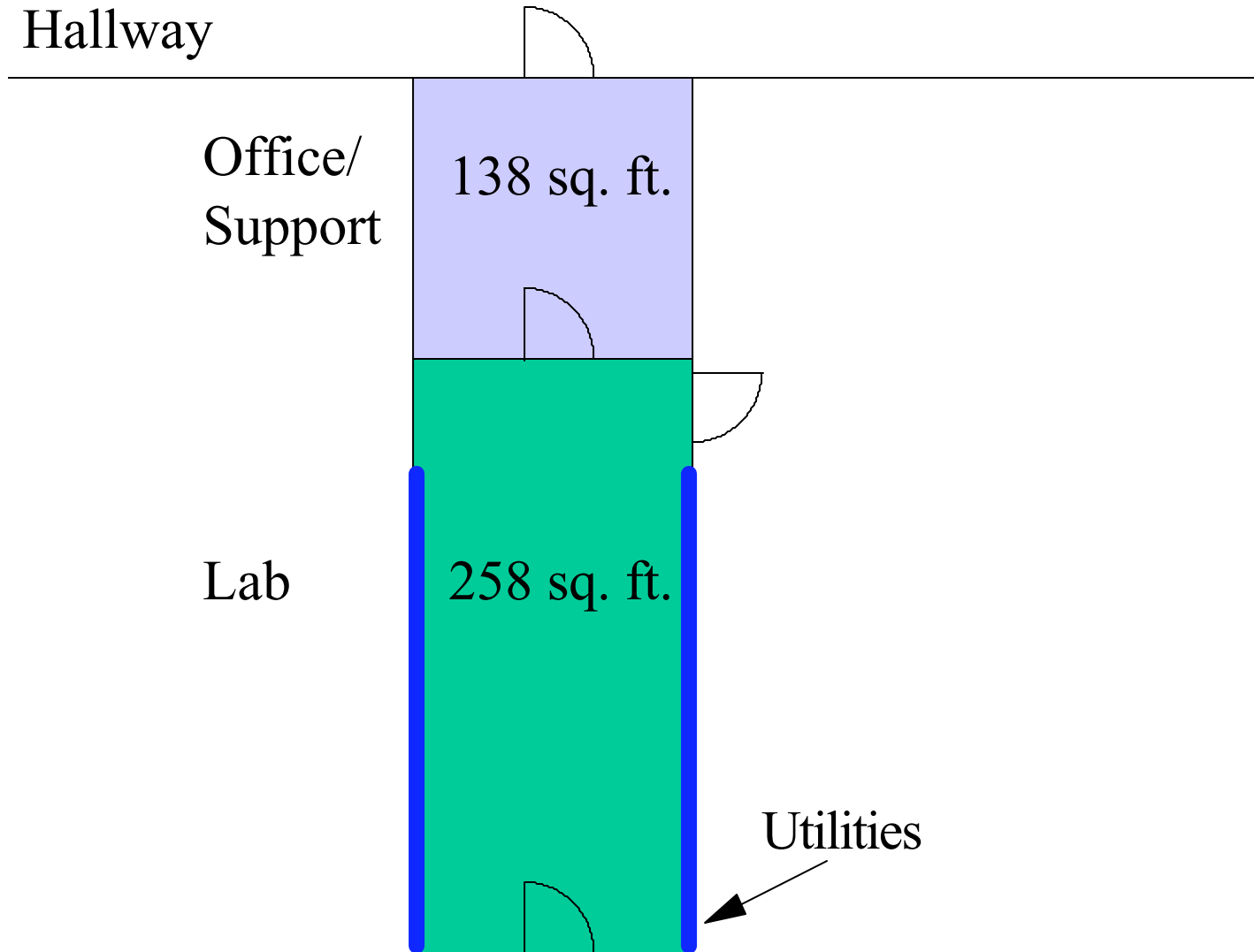
138 sq. ft.

Lab

258 sq. ft.

Utilities

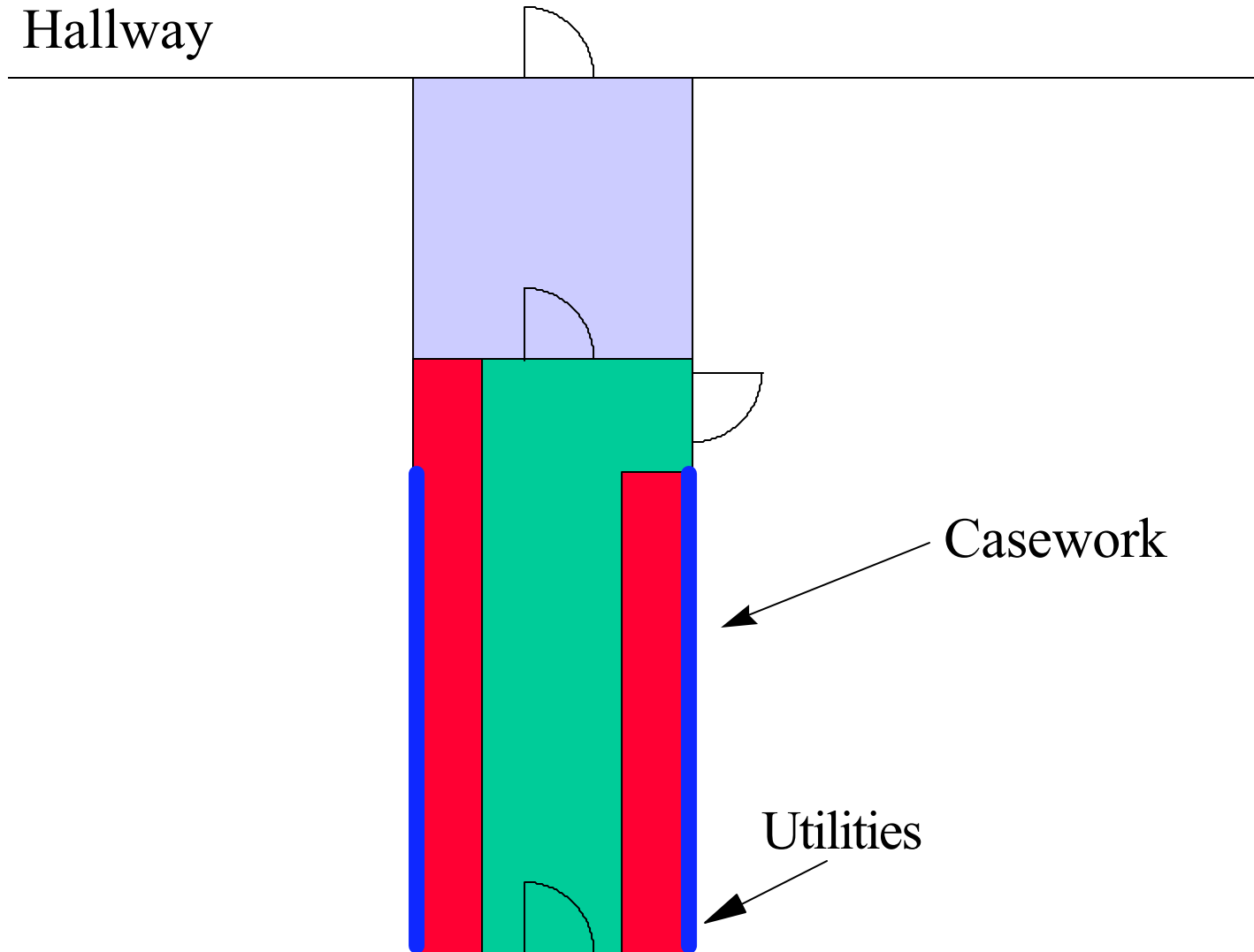
Service Corridor





# Lab Building Blocks

Hallway



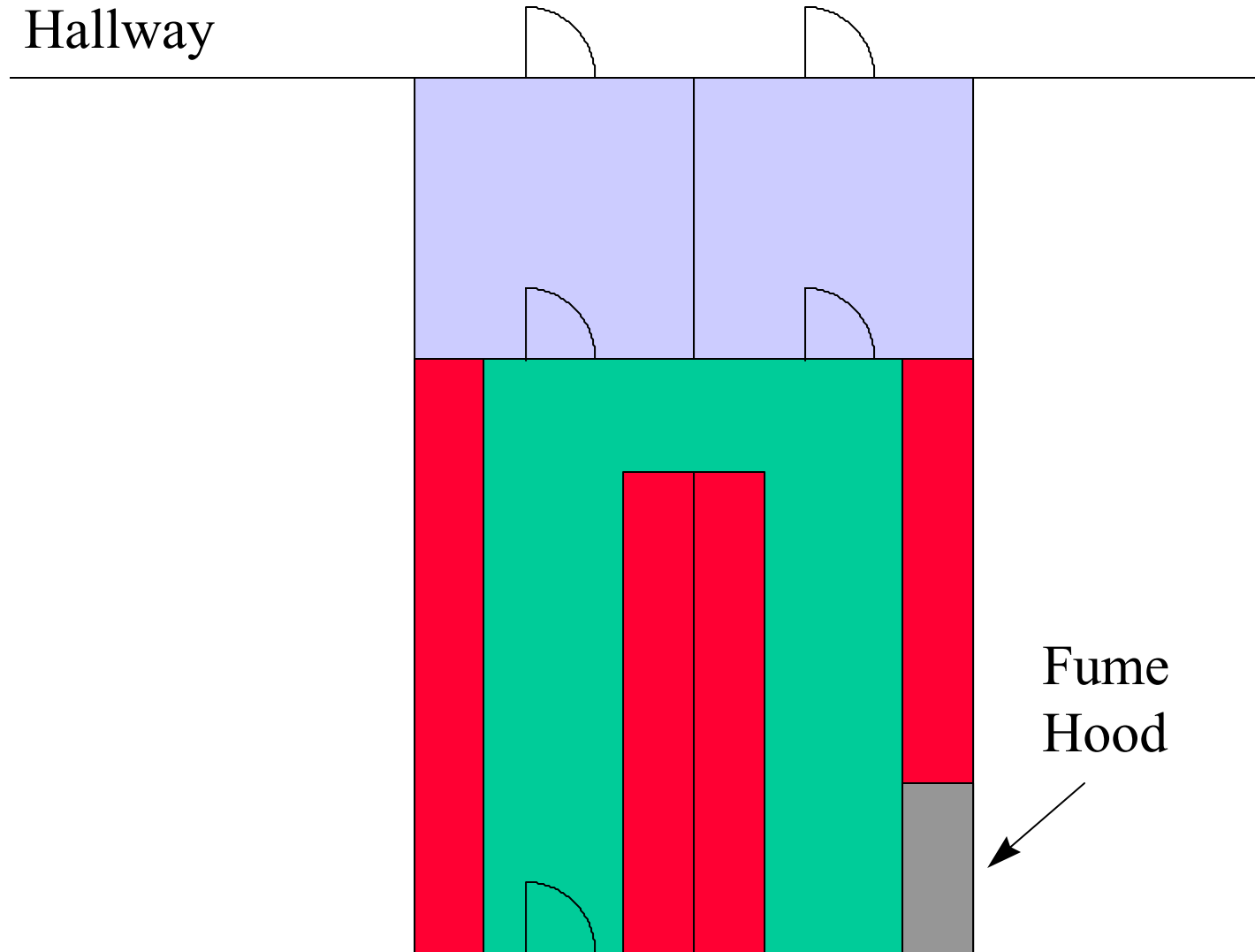
Casework

Utilities

Service Corridor

# Lab Building Blocks

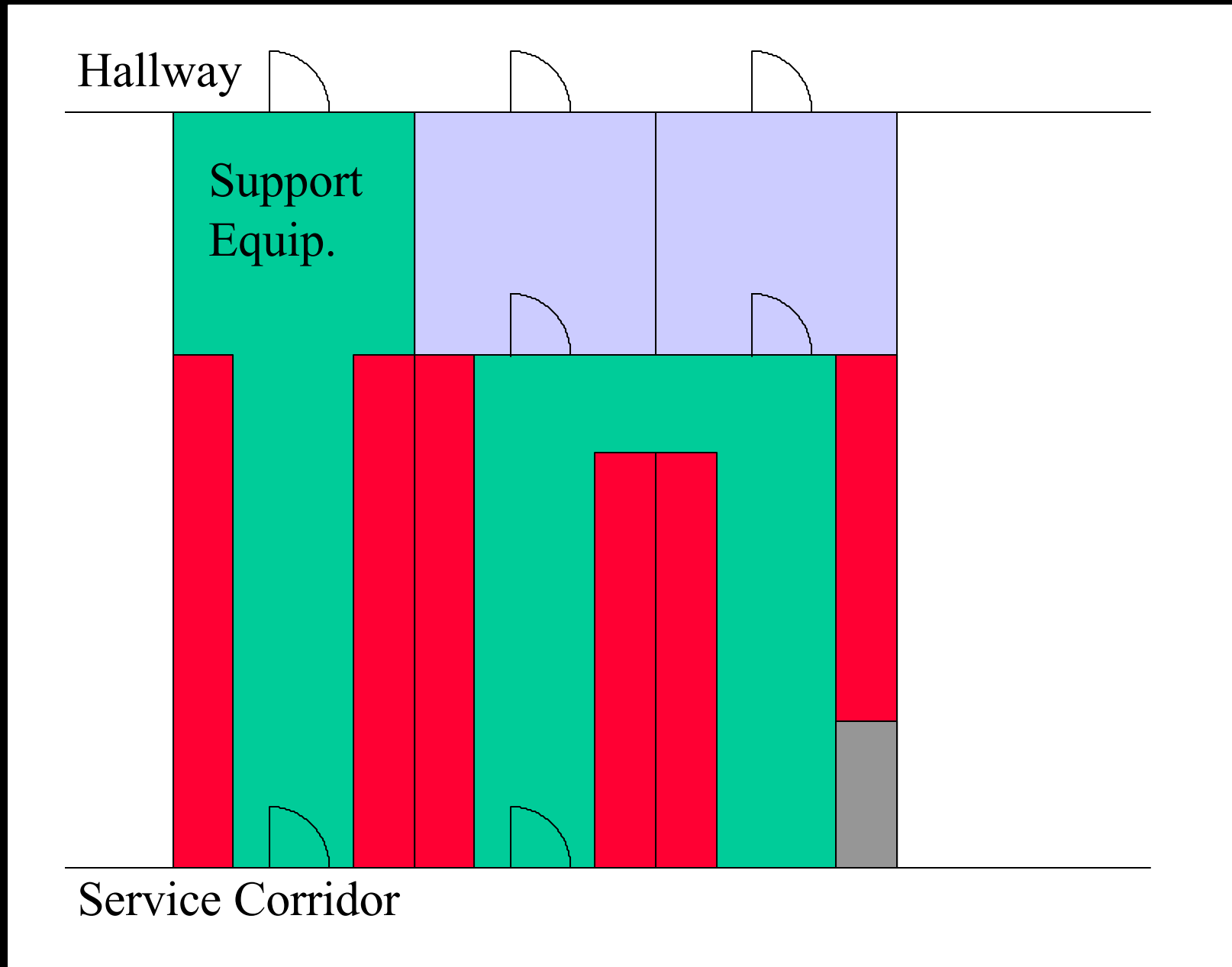
Hallway



Fume  
Hood

Service Corridor

# Lab Building Blocks



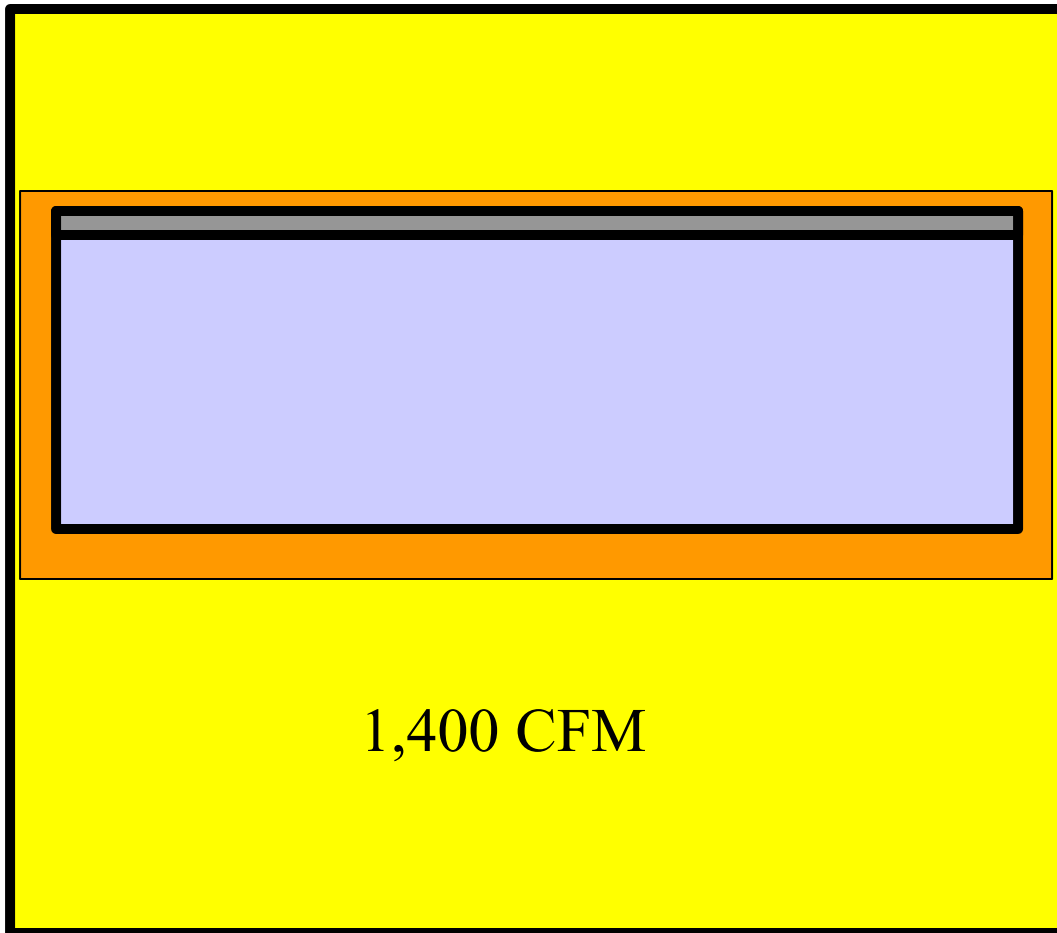
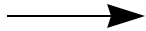


# Fume Hoods

Industry Standard 6-Foot Hood

---

100%  
Open



1,400 CFM



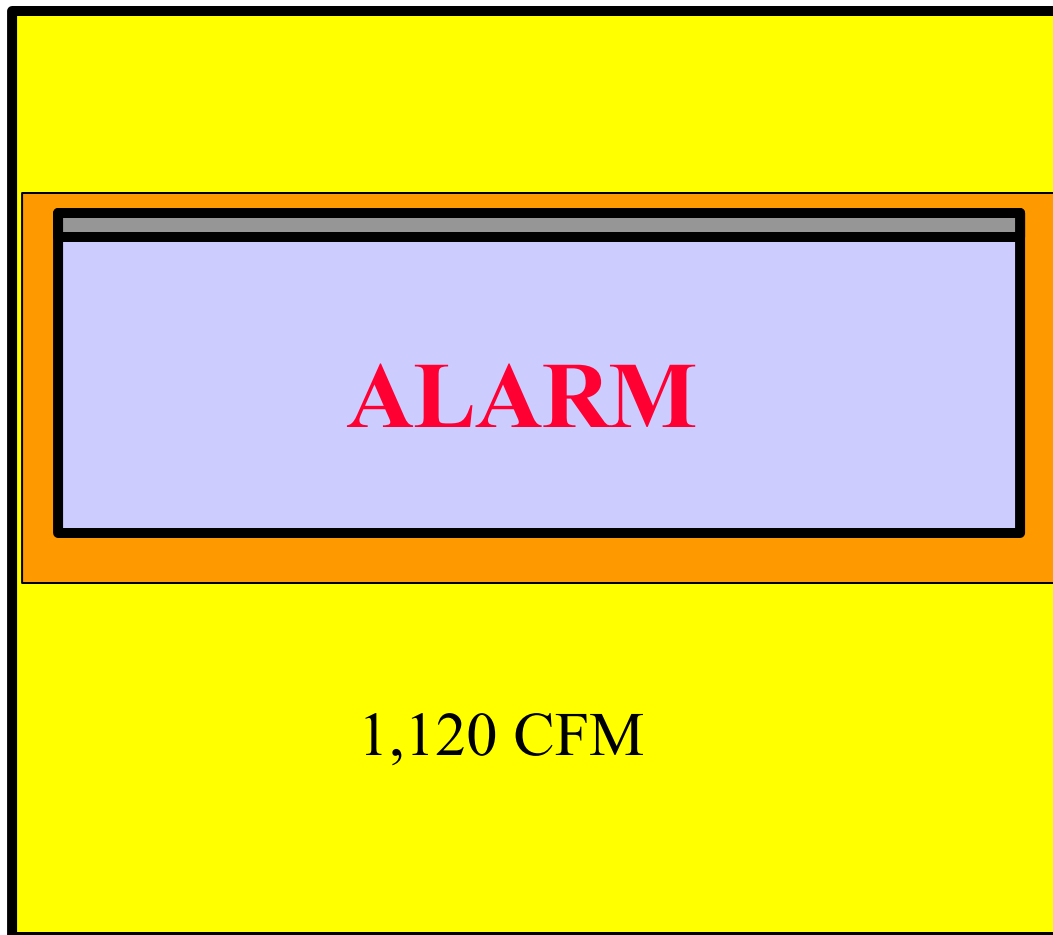
# Fume Hoods

EPA Hood: Set-up Mode

---

100%  
Open  
→

20%  
less air  
*than  
standard  
hood*

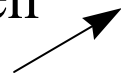


# Fume Hoods

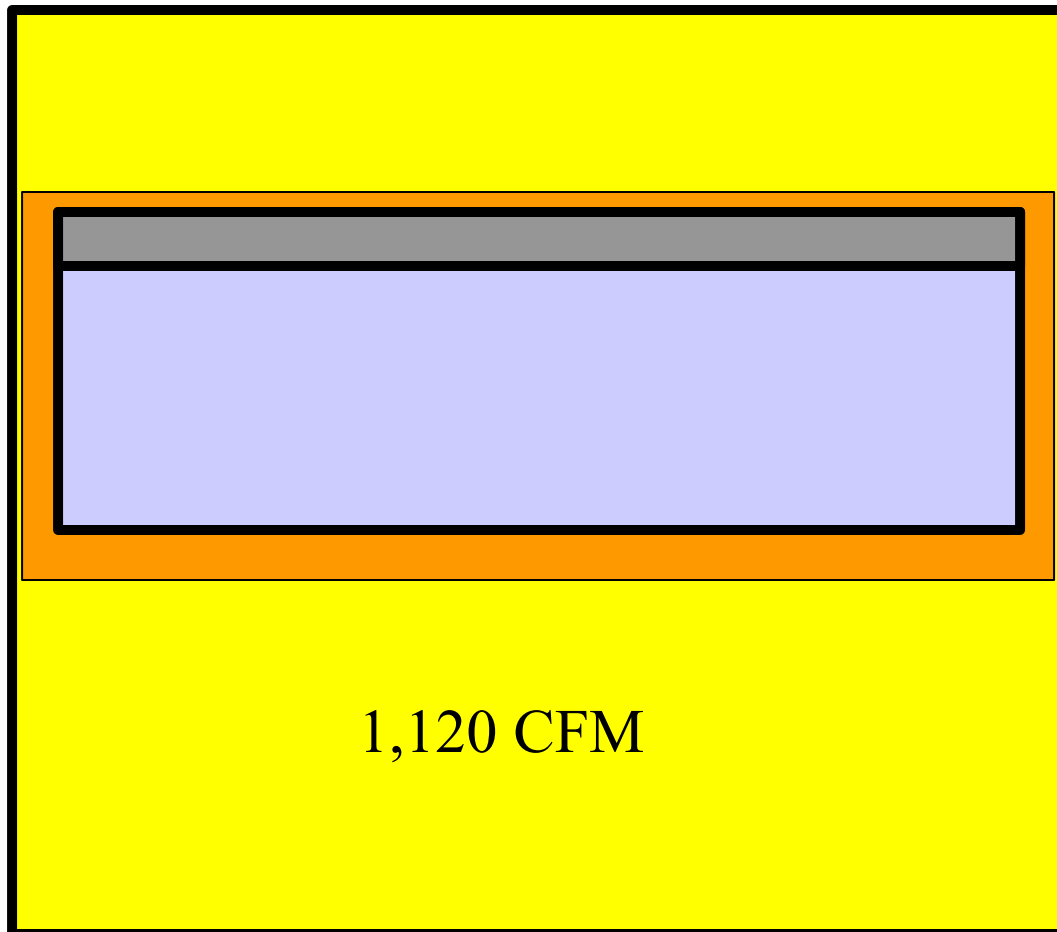
## EPA Hood: Operational Mode

---

Sash  
80%  
Open



20%  
less air  
*than  
standard  
hood*



# Fume Hoods

EPA Hood: Unoccupied Mode (Night Setback)

Sash  
Closed,  
Room  
Lights  
Off

53%  
less air  
*than  
standard  
hood*

660 CFM





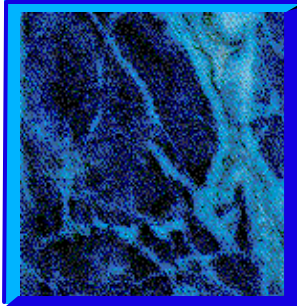


# Waste Recycling

80%

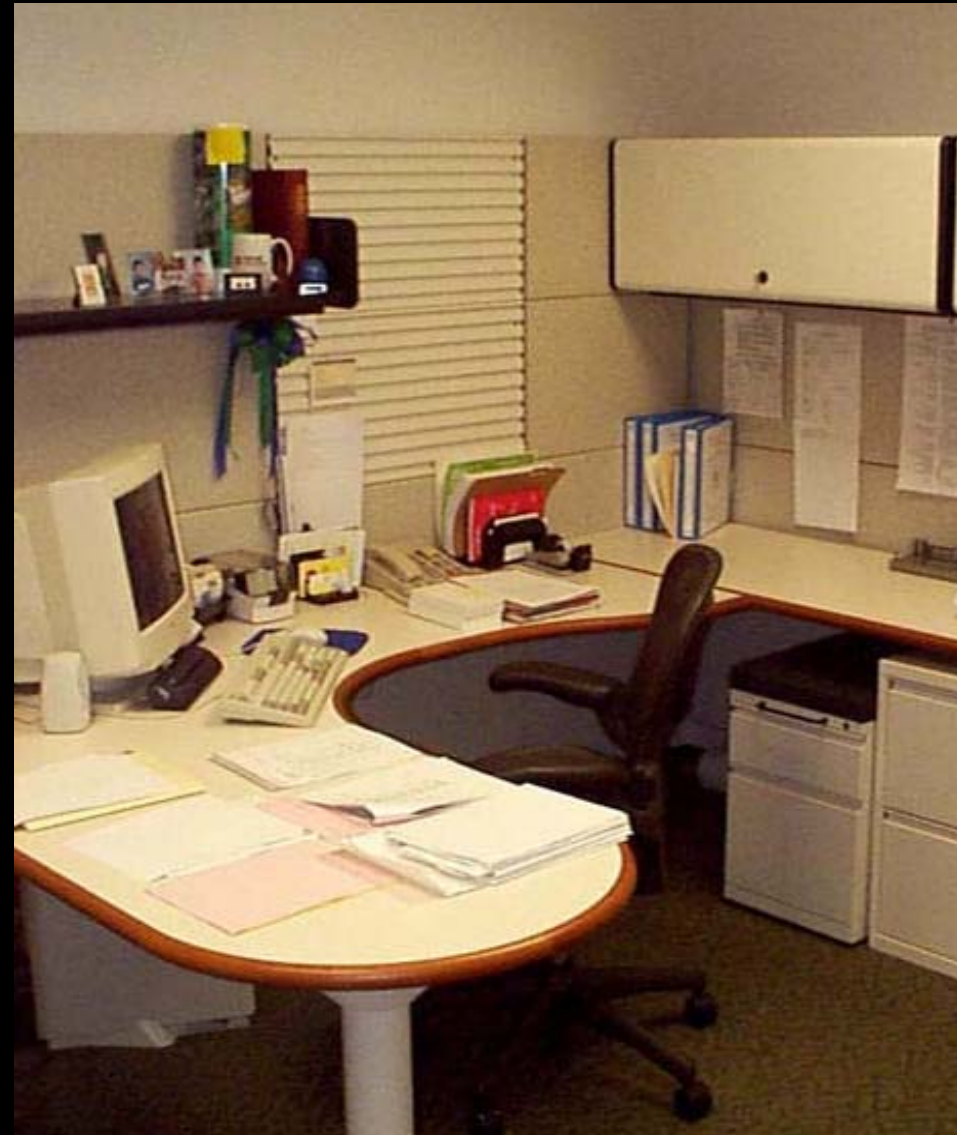


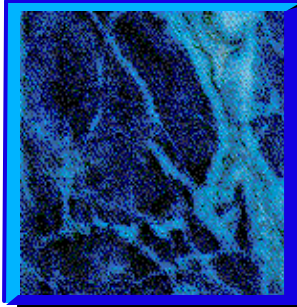




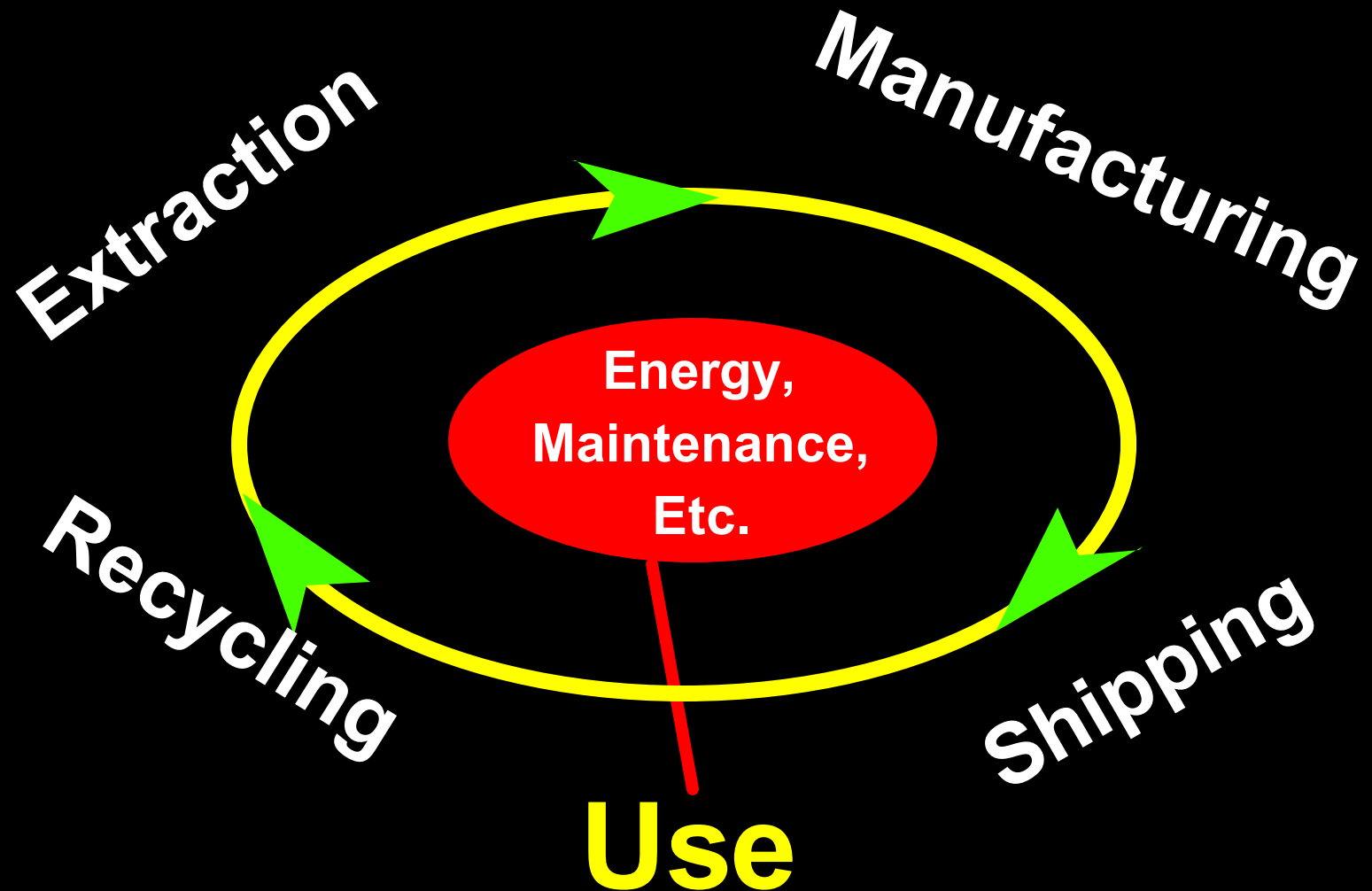
# Furnishings

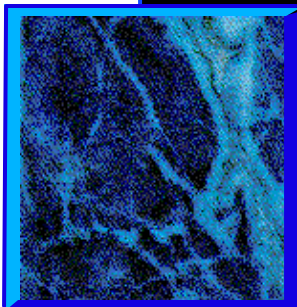
- IAQ chamber testing
- Corporate responsibility (ISO 14001 etc.)
- Factory visits
- Recycling of packing material





# Life-Cycle Focus





# Operations

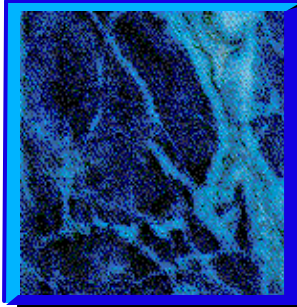












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